

The following papers were read :—

1. Notice of a New Bat (*Scotophilus welwitschii*) from Angola. By Dr. J. E. GRAY.

(Plate XXIV.)

Among an interesting series of Bats from Angola, collected by Dr. Welwitsch, and most kindly presented to the British Museum, is a very interesting and ornamental species of *Scotophilus*, with the wings coloured like *Vespertilio pictus* of Pallas.

This coloration of the wings seems common to several Bats belonging to different genera; but I have not before observed it in a species of *Scotophilus*.

SCOTOPHILUS WELWITSCHII. (Pl. XXIV.)

Brown, paler beneath; hair of the back black, with brown tips, which are longer and paler on the hairs of the under surface. The ears rather elongate, longer than head, tip rather acute; tragus elongate, lanceolate, acute, nearly half as long as the ear. The wings blackish brown, yellow-dotted, and yellow (or red brown perhaps when alive) near the body, and on and near the arms and fingers, and between the shoulders and arm-bone; interfemoral membrane yellow, black-dotted, and with a dark hinder edge, the upper surface near the base of the tail hairy; heel-bone elongate, as long as the shin. Feet pale yellow; toes black at the end; wings to the base of the toes. Thumb—upper joint black, much longer than the lower, which is yellow. The face hairy to the end of the nose, just above the nostrils. Upper cutting-teeth 1.1?, large, blunt; premolars $\frac{2}{1} \frac{2}{1}$, the front upper large, triangular; the hinder small, rudimentary. Forearm-bone 2 inches 1 line long.

Hab. Angola (*Dr. Welwitsch; B.M.*).

2. Notes on the Skulls of Dolphins, or Bottlenose Whales, in the British Museum. By Dr. J. E. GRAY, F.R.S., V.P.Z.S., F.L.S., &c.

Having had occasion to examine and determine a considerable number of skulls of Dolphins since the manuscript of the second edition of the 'Catalogue of Seals and Whales in the British Museum,' which has just been published, was sent to the press, I was induced to reexamine the whole series of them in the British Museum for the purpose of determining what were desiderata. The usual consequence followed, that I observed the importance of some characters that had been before overlooked, and thought that I could improve the manner in which the species were grouped together, so that they could be more easily distinguished from each other.

This has been my universal experience : no sooner has a monograph of a group of animals been put into print, than on the reexamination of the group, you find it might have been improved. I have therefore sent to the Society the result of this reexamination and reconsideration of the subject, and hope that it may facilitate the determination of the species of these little-known animals. I may add that, from the experience I have had, I have no doubt that the skull affords the best means of arranging the species into groups ; but I am by no means sure that what I have considered a single species by the study of the skull may not be found to be a group of several species when we are able to examine the rest of the skeleton and the external coloration of the animals which have a skull of the characters described.

The genera of the Bottlenoses may be arranged according to the skulls thus :—

A. *Beak of the skull elongate, compressed. Nasal triangle short. Symphysis of the lower jaw elongate.*

PONTOFORIA. Beak of the skull high, compressed. Symphysis of the lower jaw very long.

STENO. Beak of the skull compressed, higher than broad. Symphysis of the lower jaw long.

B. *Beak of the skull elongate, depressed, broad, shelving on the sides. Nasal triangle short. Symphysis of the lower jaw short, sloping.*

* *Palate with a deep groove on each side behind.*

DELPHINUS. Beak elongate. Dorsal fin distinct. Teeth small, slender.

** *Palate flat behind, without any lateral grooves.*

CLYMENE. Beak of skull elongate, depressed. Teeth small, slender. Nasal triangle moderate. Dorsal fin distinct.

DELPHINAPTERUS. Beak of skull elongate, depressed. Teeth small, slender. Dorsal fin none.

TURSIUS. Beak of the skull only rather longer than the brain-case, conical, convex above, rounded. Teeth large. Skull high.

EUTROPIA. Beak of the skull only rather longer than the brain-case. Skull depressed. Teeth small.

C. *Beak of the skull broad, flat above, edges slightly reflexed and bent up in front of the notch. Nasal triangle elongate. Symphysis of the lower jaw short.*

LAGENORHYNCHIUS. Beak as long as or rather shorter than the length of the brain-case.

STENO.

Steno, Gray, Cat. of Seals & Whales, p. 232.

The species may be arranged by their skulls thus. The number refers to the number of the species in the above Catalogue:—

a. *Skull large, solid, the beak compressed, high. Teeth large, conical, about two in an inch of the length of the margin of the jaw.*

3. STENO FRONTATUS. Beak of the skull short; the front part thick, high, and blunt. Teeth 24/24, large, two in an inch.

4. STENO COMPRESSUS. Beak of the skull elongate, compressed, attenuated in front. Teeth 26/26, large, two in an inch (Zool. E. & T. t. 27).

Steno rostratus appears to belong to this section.

b. *Skull small, rather spongy. Teeth small, slender, attenuated, about four or five in an inch of the length of the margin of the jaw.*

* *Beak of the skull elongate, compressed, much attenuated and acute in front. Teeth four in an inch. Sousa.*

4*. STENO CAPENSIS.

4**. STENO LENTIGINOSUS.

The skull of *Steno roseiventris*, according to the figure, appears to belong to this section of the genus.

** *Beak of the skull short, compressed, much attenuated and acute in front. Teeth five in an inch. Tucuxa.*

7. STENO TUCUXI.

*** *Beak of the skull elongate, rather depressed, broad, slightly compressed on the sides. Teeth small, five in an inch. Stenella.*

5. STENO ATTENUATUS. The beak of the skull flattened (Zool. E. & T. t. 28).

This last section is nearly intermediate between *Steno* and *Clymene*.

DELPHINUS.

The species referred to *Delphinus*, Section *b*, in the 'Catalogue of Seals and Whales,' belong to this genus. The teeth are small and slender, five or six in an inch.

* *Beak of skull twice as long as the brain-case. Teeth $\frac{55}{55}$ or $\frac{56}{56}$.*

2. DELPHINUS LONGIROSTRIS,

** *Beak of skull once and a half the length of the brain-case.*

Teeth $\frac{45}{45}$ to $\frac{50}{50}$.

3. DELPHINUS DELPHIS.

3*. DELPHINUS MOOREI.

3**. DELPHINUS MAJOR.

3***. DELPHINUS WALKERI.

5. DELPHINUS JANIRA, Zool. E. & T. t. 23.

CLYMENE.

Skull elongate, slender; brain-case spherical; beak slender, elongate, longer than the brain-case; intermaxillaries convex. Teeth small, slender, five or six in an inch. The symphysis of the lower jaw short. The blowers are moderate. See *Clymene*, Gray, P. Z. S. 1864, p. 237.

* *Beak of the skull twice as long as the brain-case. Teeth five in an inch.*

CLYMENE STENORHYNCHA. *Delphinus stenorhynchus*, Cat. of Seals & Whales, p. 396.

** *Beak of the skull once and three-quarters the length of the brain-cavity. Teeth six in an inch. Euphrosyne.*

1. CLYMENE MICROPS. *D. microps*, Gray, Cat. p. 240; Zool. E. & T. t. 25.

16. CLYMENE ALOPE. *D. alope*, Gray, Cat. p. 252.

18. CLYMENE EUPHROSYNE. *D. euphrosyne*, Gray, Cat. p. 251; Zool. E. & T. t. 22.

*** *Beak of the skull once and one-half or once and one-third the length of the brain-cavity. Teeth five or six in an inch. Clymene.*

CLYMENE NORMALIS. Beak of the skull once and one-half the length of the brain-case, and as long as twice and one-half the width at the notch. Teeth 40, nearly six in an inch. *Delphinus clymene*, Gray, Cat. p. 249.

CLYMENE DORIS. Beak of the skull once and one-half the length of the brain-case, and as long as twice and a half the width at the notch. Teeth five in an inch. *Tursio doris*, Gray, Cat. Seals & Whales, p. 255; Zool. E. & T. t. 20.

CLYMENE DORIDES. Beak of the skull once and one-third the

length of the brain-case, and as long as twice and one-third the width at the notch. Teeth five in an inch. *Tursio dorcides*, Gray, Cat. of Seals & Whales, p. 400.

CLYMENE OBSCURA. Beak of the skull once and one-sixth the length of the brain-case, and as long as twice and one-half the width at the notch. Teeth five or six in an inch. The aperture of the blower large. *Tursio obscurus*, Gray, Cat. Seals & Whales, p. 264; Zool. E. & T. t. 16.

These skulls are somewhat like those of the genus *Tursio*, but the teeth are small.

TURSIO.

The skull large, thick, heavy, with a high swollen brain-cavity. The beak longer than the brain-case, broad, conical, stout, shelving on the sides. Teeth large, $\frac{22}{22}$ or $\frac{25}{25}$. The blower large. Nasal triangle produced considerably before the notch.

3. TURSIO METIS, Zool. E. & T. t. 18.

4. TURSIO CYMODOCE, Zool. E. & T. t. 19.

6. TURSIO TRUNCATUS. North Sea and Mediterranean.

8. TURSIO EURYNOME, Gray, Zool. E. & T. t. 17. South Sea; India?

10. TURSIO CATALANIA. North-west coast of Australia.

These skulls are all so much alike that they may only be varieties.

EUTROPIA.

Skull depressed, thick, with the sides rather bent down behind the notch. The beak depressed, broad, rounded on the sides, rather longer than the length of the brain-case; the intermaxillaries flat, rather broad. Teeth small, slender, five or six in an inch.

Eutropia, Gray, P. Z. S. 1862, p. 145; Cat. Seals & Whales, p. 262.

EUTROPIA DICKIEI. *Tursio eutropia*, Gray, P. Z. S. 1862, p. 145; Cat. Seals & Whales, p. 262. Chili.

EUTROPIA HEAVISIDII. *Tursio heavisidii*, Gray, Cat. Seals & Whales, p. 263. From the Cape Seas.

The *D. cephalorhynchus* of F. Cuvier, judging from the figure of the skull given by Schlegel, appears also to belong to this genus.

The skull bears a considerable affinity to the skulls of *Phocaena*, *Neomeris*, *Beluga*, and *Monodon* in the bending down of the sides.

LAGENORHYNCHIUS.

The skulls of the species in the British Museum may be thus arranged :—

I. *The beak of the skull very flat above, with the edges in front of the notches bent up. Teeth-line stopping considerably short of the notch. Electra.*

† *Beak of the skull rather longer (about one-third) than the length of the brain-case. Teeth moderate, four in an inch, those in the lower jaw rather larger.*

1. LAGENORHYNCHUS ELECTRA. Beak rounded in front (Zool. E. & T. t. 13).

3. LAGENORHYNCHUS ASIA. Beak attenuated, acute in front (Zool. E. & T. t. 14).

4. LAGENORHYNCHUS ACUTUS, according to Schlegel's figure of the skull, should be arranged in this section.

†† *Beak of the skull rather shorter than the length of the brain-cavity. Teeth small, five or six in an inch.*

5. LAGENORHYNCHUS CLANCULUS. Beak of the skull broad behind, once and three-fourths the width of the notch in length. Teeth five in an inch.

7. LAGENORHYNCHUS THICOLEA. Beak of the skull narrow behind, twice as long as the width at the notch. Teeth small, six an inch.

II. *Beak of the skull rather flat above and elongate, bent up on the edge in front of the notch. Teeth-line reaching nearly to the notch.*

* *Beak of the skull narrow behind, as long as or slightly longer than the length of the brain-case. Teeth small, five in an inch. First and second cervical vertebræ united by their bodies; third and fourth by the spinous processes. Leucopleurus.*

9. LAGENORHYNCHUS LEUCOPLEURUS. Beak of the skull twice as long as the width at the notch. Teeth small, five in an inch.

** *Beak of the skull broad behind, rather shorter than the length of the brain-case. Teeth large, three in an inch. First and second cervical vertebræ united by their bodies; the third, fourth, fifth, six, and seventh free. Lagenorhynchus.*

8. LAGENORHYNCHUS ALBIROSTRIS. The beak of the skull once and one-half as long as the width at the notch.